

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: March 15, 2001, 10:52:21 ; Search time 35.6 Seconds
(without alignments)
13.447 Million cell updates/sec

Title: US-09-288-719-2
Perfect score: 75
Sequence: 1 GGCGSGGRASGGS 14

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 268485 seqs, 34193795 residues
Total number of hits satisfying chosen parameters: 268485

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

A.Geneseq-36.*
1: /SIDSI/gcgdata/geneseq/AA1980.DAT.*
2: /SIDSI/gcgdata/geneseq/AA1981.DAT.*
3: /SIDSI/gcgdata/geneseq/AA1982.DAT.*
4: /SIDSI/gcgdata/geneseq/AA1983.DAT.*
5: /SIDSI/gcgdata/geneseq/AA1984.DAT.*
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8: /SIDSI/gcgdata/geneseq/AA1987.DAT.*
9: /SIDSI/gcgdata/geneseq/AA1988.DAT.*
10: /SIDSI/gcgdata/geneseq/AA1989.DAT.*
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14: /SIDSI/gcgdata/geneseq/AA1993.DAT.*
15: /SIDSI/gcgdata/geneseq/AA1994.DAT.*
16: /SIDSI/gcgdata/geneseq/AA1995.DAT.*
17: /SIDSI/gcgdata/geneseq/AA1996.DAT.*
18: /SIDSI/gcgdata/geneseq/AA1997.DAT.*
19: /SIDSI/gcgdata/geneseq/AA1998.DAT.*
20: /SIDSI/gcgdata/geneseq/AA1999.DAT.*
21: /SIDSI/gcgdata/geneseq/AA2000.DAT.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	75	100.0	14	20	Y50706
2	75	100.0	14	20	Y33596
3	71	94.7	15	20	Y50707
4	69	92.0	13	20	Y50708
5	69	92.0	13	20	Y33589
6	64	85.3	240	20	Y43326
7	64	85.3	240	20	W94178
8	64	85.3	240	21	Y77553
9	64	85.3	301	19	W37085
10	64	85.3	738	19	W56163
11	61	81.3	16	17	R86794
12	61	81.3	232	20	Y08856

13	61	81.3	232	20	Y08769
14	61	81.3	339	21	Y44413
15	61	81.3	358	21	Y44414
16	60	80.0	14	16	R87024
17	60	80.0	14	18	W23417
18	60	80.0	14	19	W47355
19	60	80.0	14	20	Y23638
20	60	80.0	14	20	Y17953
21	60	80.0	15	13	R25983
22	60	80.0	15	15	R59500
23	60	80.0	15	15	R55123
24	60	80.0	15	16	R76683
25	60	80.0	15	17	W09323
26	60	80.0	15	17	R99244
27	60	80.0	15	17	R95067
28	60	80.0	15	18	W35984
29	60	80.0	15	18	W10295
30	60	80.0	15	20	Y49219
31	60	80.0	15	20	Y43414
32	60	80.0	15	20	Y33328
33	60	80.0	15	20	Y27397
34	60	80.0	15	20	Y21600
35	60	80.0	15	20	Y03763
36	60	80.0	15	20	W87784
37	60	80.0	15	21	Y79551
38	60	80.0	15	21	Y79552
39	60	80.0	15	21	Y70606
40	60	80.0	16	17	R99243
41	60	80.0	17	20	W9361
42	60	80.0	18	15	R60525
43	60	80.0	18	20	Y43500
44	60	80.0	18	21	Y83214
45	60	80.0	19	20	Y25402

ALIGNMENTS

RESULT	1
ID	Y50706
XX	standard; peptide; 14 AA.
AC	Y50706;
DT	08-FEB-2000 (first entry)
XX	
DE	VH-L-VL construct peptide linker 1.
XX	
KW	Immunoglobulin; light chain; VL region; heavy chain; VH region;
KW	single-chain; antigen binding; variable domain; anticancer; treatment;
KW	antiviral; antibacterial; antimalarial; antiinflammatory; diagnosis;
KW	tumor vaccine; autoimmune disease; inflammation; blood disorder;
XX	nervous system; infection.
OS	Synthetic.
XX	
PN	DE19827239-A1.
XX	
PD	23-DEC-1999.
XX	
PF	18-JUN-1998; 98DE-1027239.
XX	
PR	18-JUN-1998; 98DE-1027239.
XX	
PA	(HMRI) HOECHST MARION ROUSSEL DEUT GMBH.
XX	
PI	Kontermann R; Sedlacek H; Mueller R;
XX	
DR	WPI; 1999-591691/51.
XX	
PT	Single chain molecule binding antigen, its preparation and medicinc
PT	containing this molecule - consists of binding some antigen with
PT	different variable domain of light and heavy chain of immunoglobulin.

Expression construn
B7-2-beta 2 microg
B7-2-beta 2 microg
Flexible linker se
Linker peptide for
Polylinker. Synth
Linker peptide use
Amino acid sequenc
Peptide monomer 21
Hydrophilic linker
Gene delivery fusi
Human ONS-M21 anti
Peptide linker arm
(Gly4Ser)3 linker.
scfv spacer peptid
Peptide linker SBQ
Peptide linker for
Sequence of a link
Peptide SEQ ID NO:
E6-sfv peptide lin
Flexible linker us
EP-919566 peptide
Linker peptide in
Antibody-beta-lact
Linker peptide use
Linker peptide use
protein encoded by
(Gly4Ser)3ser link
Linker peptide for
Linker peptide us
Linker for dual av
Peptide linker use
Activity modulatin

xx Claim 9; Page 13; 26pp; German.
xx
xx This invention describes a novel single-chain molecule (I) that binds
CC multiple antigens and comprises two variable domains of heavy
CC immunoglobulin chains (VH) and two variable domains of light chains (VL).
CC The domains are provided as two VH-VL constructs which are attached via
CC a peptide (P). Any VH and VL may be replaced by their functional
CC fragments. The products of the invention have anticancer, antiviral,
CC antibacterial, antimalarial, and antiinflammatory activity. (I) are used
CC to treat, prevent or diagnose tumors (e.g. as tumor vaccines), autoimmune
CC diseases and inflammation (e.g. transplant rejection and arthritis),
CC blood disorders (e.g. of the coagulation and/or circulatory systems, such
CC as anemia, leucopenia, thrombocytopenia and hypertension), nervous system
CC disorders and/or infections (by viruses or bacteria, or malaria),
CC including, when (I) include a fusogenic peptide, use for gene transfer.
CC This sequence represents a linker peptide used in the construction of the
CC single chain molecule of the invention.
CC NOTE: This specification is a treat as basic for C2-9901215 in Derwent
CC week 9951.
xx
xx Sequence 14 AA:
SQ
Query Match 100.0%; Score 75; DB 20; Length 14;
Best Local Similarity 100.0%; Pred. No. 0.0011;
Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY 1 GGGSGGRRASGGGS 14
Db 1 9999sgrrasggs 14
RESULT 2
Y33596
ID Y33596 standard; Protein: 14 AA.
XX Y33596:
XX 20-DEC-1999 (first entry)
XX
XX VH-VL domain linker peptide #8.
DE
XX Antigen binding; single chain; variable domain; VH domain; light chain;
KW heavy immunoglobulin chain; VL domain; anticancer; antiviral; tumor;
KW antibacterial; antimalarial; antiinflammatory; treatment; prevention;
KW diagnosis; vaccine; autoimmune disease; inflammation; blood disorder;
KW transplant rejection; arthritis; nervous system disorder; infection.
KM
XX Synthetic.
OS
XX
XX DEL9816141-A1.
XX
XX 14-OCT-1999.
PD
XX 09-APR-1998; 98DE-1016141.
XX
XX 09-APR-1998; 98DE-1016141.
PF
XX 09-APR-1998; 98DE-1016141.
PR
XX (HMRI) HOECHST MARION ROUSSEL DEUT GMBH.
PA
XX Kontermann R, Sedlacek H, Mueller R;
PI
XX WPI: 1999-581511/50.
DR
XX
XX New polyspecific binding agents containing variable heavy and light
PT constructs connected via peptide linker, used for treatment, prevention
PT or diagnosis of e.g. cancer -
XX
XX Claim 9; Page 16; 20pp; German.
PS
XX This sequence represents a novel single-chain molecule (I) that binds
CC multiple antigens and comprises two variable domains of heavy

CC immunoglobulin chains (VH), having specificities A and B and two
CC variable domains of light chains (VL), also with specificities A and B.
CC The domains are provided as two VH-VL constructs which are attached via
CC a peptide (P). Any VH and VL may be replaced by their functional
CC fragments. The products of the invention have anticancer, antiviral,
CC antibacterial, antimalarial and antiinflammatory activity. (I) are used
CC to treat, prevent or diagnose tumors (e.g. as tumor vaccines), autoimmune
CC diseases and inflammation (e.g. transplant rejection and arthritis),
CC blood disorders (e.g. of the coagulation and/or circulatory systems, such
CC as anemia, leucopenia, thrombocytopenia and hypertension), nervous system
CC disorders and/or infections (by viruses or bacteria, or malaria),
CC including, when (I) include a fusogenic peptide, use for gene transfer.
CC (I) are produced simply and in predominantly homogeneous form, in a wide
CC variety of hosts, either in secreted or membrane-bound forms. This
CC sequence represents a VH-VL domain linker peptide which is used to
CC illustrate the method of the invention.
xx
xx Sequence 14 AA:
SQ
Query Match 100.0%; Score 75; DB 20; Length 14;
Best Local Similarity 100.0%; Pred. No. 0.0011;
Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY 1 GGGSGGRRASGGGS 14
Db 1 9999sgrrasggs 14
RESULT 3
Y50707
ID Y50707 standard; peptide: 15 AA.
XX Y50707:
XX
XX 08-FEB-2000 (first entry)
XX
XX VH-L-VL construct peptide linker 2.
DE
XX Immunoglobulin; light chain; VL region; heavy chain; VH region;
KW single-chain; antigen binding; variable domain; anticancer; treatment;
KW antiviral; antibacterial; antimalarial; antiinflammatory; diagnosis;
KW tumor vaccine; autoimmune disease; inflammation; blood disorder;
KW nervous system; infection.
KM
XX Synthetic.
OS
XX
XX DEL9827239-A1.
XX
XX 23-DEC-1999.
PD
XX 18-JUN-1998; 98DE-1027239.
XX
XX 18-JUN-1998; 98DE-1027239.
PR
XX (HMRI) HOECHST MARION ROUSSEL DEUT GMBH.
PA
XX Kontermann R, Sedlacek H, Mueller R;
PI
XX WPI: 1999-591691/51.
DR
XX
XX Single chain molecule binding antigen, its preparation and medicine
PT containing this molecule - consists of binding some antigen with
PT different variable domain of light and heavy chain of immunoglobulin.
XX
XX Claim 9; Page 14; 26pp; German.
PS
XX This invention describes a novel single-chain molecule (I) that binds
CC multiple antigens and comprises two variable domains of heavy
CC immunoglobulin chains (VH) and two variable domains of light chains (VL).
CC The domains are provided as two VH-VL constructs which are attached via
CC a peptide (P). Any VH and VL may be replaced by their functional
CC fragments. The products of the invention have anticancer, antiviral,

CC antibacterial, antimalarial, and antiinflammatory activity. (I are used
CC to treat, prevent or diagnose tumors (e.g. as tumor vaccines), autoimmune
CC diseases and inflammation (e.g. transplant rejection and arthritis),
CC blood disorders (e.g. of the coagulation and/or circulatory systems, such
CC as anemia, leucopenia, thrombocytopenia and hypertension), nervous system
CC disorders and/or infections (by viruses or bacteria, or malaria),
CC including, when (I) include a fusogenic peptide, use for gene transfer.
CC This sequence represents a linker peptide used in the construction of the
CC single chain molecule of the invention.
CC NOTE: This specification is a treat as basic for C2-9901215 in Derwent
CC week 9951.
XX
XX Sequence 15 AA:

Query Match	94.7%	Score 71	DB 20	Length 15
Best Local Similarity	100.0%	Pred. No. 0.0035		
Matches: 13	Conservative 0	Mismatches 0	Indels 0	Gaps 0
QY	1 GGGSGGGRASGG	13		
b	1 gggsgggrasgg	13		

RESULT	4
Y50708	
ID	Y50708 standard; peptide; 13 AA.

DT 08-FEB-2000 (first entry)

DE VH-L-VL construct peptide linker 3

KW Immunoglobulin; light chain; VL region; heavy chain; VH region;
 KW single-chain; antigen binding; variable domain; anticancer; treatment;
 KW antiviral; antibacterial; antimalarial; antiinflammatory; diagnosis;
 KW tumor vaccine; autoimmune disease; inflammation; blood disorder;
 KW nervous system; infection.

.....
OS Synthetic.

PN DE19827239-A1.

PD 23-DEC-1999.

PF 18-JUN-1998; 98DE-1027239.

PR 18-JUN-1998; 98DE-1027239.

PA (HMRI) HOECHST MARION ROUSSEL DEUT GMBH.

PI Kontermann R, Sedlacek H, Mueller R;

WPI; 1999-591691/51.

PT Single chain molecule binding antigen, its preparation and medicine containing this molecule - consists of binding some antigen with different variable domain of light and heavy chain of immunoglobulin

PS : Example 1; Page 16; 26pp; German.

This invention describes a novel single-chain molecule (I) that binds multiple antigens and comprises two variable domains of heavy immunoglobulin chains (VH) and two variable domains of light chains (VL). The domains are provided as two VH-VL constructs which are attached via a peptide (P). Any VH and VL may be replaced by their functional fragments. The products of the invention have anticancer, antiviral, antibacterial, antimalarial, and antiinflammatory activity. (I) are used to treat, prevent or diagnose tumors (e.g. as tumor vaccines), autoimmune diseases and inflammation (e.g. transplant rejection and arthritis), blood disorders (e.g. of the coagulation and/or circulatory systems, such as anemia, leucopenia, thrombocytopenia and hypertension), nervous system disorders (e.g. Alzheimer's disease), and other diseases.

CC disorders and/or infections (by viruses or bacteria, or *Mycobacteria*),
CC including, when (I) include a fusogenic peptide, use for gene transfer.
CC This sequence represents a linker peptide used in the construction of the
CC single chain molecule of the invention.
CC NOTE: This specification is a treat as basic for C7-9901215 in Derwent
CC week 9951.

SQ Sequence 13 AA;
XX

Query Match	92.0%	Score 69	DB 20	Length 13
Best Local Similarity	100.0%	Pred. No. 0.0053		
Matches 13	Conservative 0	Mismatches 0	Indels 0	Gaps 0
OY	2 GGGSGGRASGGGS	14		
db	1 gggsggrasgggs	13		

RESULT	5
Y33589	
ID	Y33589 standard; Protein; 13 AA

AC Y335

DT 20-DEC-1999 (first entry)

DE VH-VL domain linker peptide #1

KW Antigen-binding; single chain; variable domain; VH domain; light chain.
 KW heavy immunoglobulin chain; VL domain; antileukemia; antiviral; tumor;
 KW antibacterial; antimetastatic; antinflammation; treatment; prevention;
 KW diagnosis; vaccine; autoimmune disease; inflammation; blood disorder;
 KW transplant rejection; arthritis; nervous system disorder; infection.

OS Synthetic

PN DE19816141-A1.

PD 14-OCT-1999

PF 09-APR-1998; 98DE-1016141.

PR 09-APR-1998; 98DE-1016141.

PA (HMRI) HOECHST MARION ROUSSEL DEUT GMBH

PI Kontermann R, Sedlacek H, Mueller R

DR WPI; 1999-581511/50.

PT New polyspecific binding agents containing variable heavy and light
PT constructs connected via peptide linker, used for treatment, prevention
PT or diagnosis of e.g. cancer -

PS Example 1; Page 14; 20pp; German.

This sequence represents a novel single-chain molecule (I) that binds multiple antigens and comprises two variable domains of heavy immunoglobulin chains (VH), having specificities A and B and two variable domains of light chains (VL), also with specificities A and B. The domains are provided as two VH-VL constructs which are attached via a peptide (P). Any VH and VL may be replaced by their functional fragments. The products of the invention have anticancer, antiviral, antibacterial, antimalarial and antiinflammatory activity. (I) are used to treat, prevent or diagnose tumors (e.g. as tumor vaccines), autoimmune diseases and inflammation (e.g. transplant rejection and arthritis), blood disorders (e.g. of the coagulation and/or circulatory systems, such as anemia, leucopenia, thrombocytopenia and hypertension), nervous system disorders and/or infections (by viruses or bacteria, or malaria), including, when (I) include a fusogenic peptide, use for gene transfer. (I) are produced simply and in predominantly homogeneous form, in a wide variety of hosts, either in secreted or membrane-bound forms. This

CC sequence represents a VH-VL domain linker peptide which is used to
 CC illustrate the method of the invention.

SQ Sequence 13 AA;

Query Match 92.0%; Score 69; DB 20; Length 13;

Best Local Similarity 100.0%; Pred. No. 0.0053;

Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 2 GGGSGGSRASGGGS 14

DB 1 GGGSGGSRASGGGS 13

RESULT 6

Y43326 Y43326 standard; Protein: 240 AA.

AC Y43326;

DT 25-JAN-2000 (first entry)

DE Mouse BR96 sfv antibody.

KW BR96 sfv; antibody; mouse; immunoconjugate; antigen-binding region;
 KW tumour cell; cancer; therapy; carcinoma cell imaging.

OS Mus musculus.

PN US5980896-A.

PD 09-NOV-1999.

PE 14-JUN-1993; 93US-0077253.

PR 30-JUN-1989; 89US-0374947.

PR 26-JUN-1990; 90US-0544246.

PR 01-JUN-1992; 92US-0892501.

PR 05-MAY-1993; 93US-0057444.

PI (BRIM) BRISTOL-MYERS SQUIBB CO.

PI Hellstrom I, Bruce KF, Schreiber GJ, Siegall C, McAndrew S;

PI Hellstrom KE;

DR WPI: 1999-633297/54.

DR N-PSDB: 231898.

PT Immunoconjugate comprising an antigen-binding region of a monoclonal

PT antibody joined to a therapeutic agent -

PS Example 14; Fig 35; 132pp; English.

CC This sequence is the BR96 sfv antibody. The invention relates to an
 CC immunoconjugate comprising a molecule containing the antigen-binding
 CC region of the BR96 monoclonal antibody (ATCC 10036) joined to a
 CC therapeutic agent. The immunoconjugates selectively kill tumour cells and
 CC are therefore useful for the treatment of cancer. The BR96 antigen can be
 CC used in a method for imaging carcinoma cells.

SQ Sequence 240 AA;

Query Match 85.3%; Score 64; DB 20; Length 240;

Best Local Similarity 85.7%; Pred. No. 0.31;

Matches 12; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

OY 1 GGGSGGSRASGGGS 14

DB 117 GGGSGGSRASGGGS 130

RESULT 7
 ID W94178 W94178 standard; Protein: 240 AA.

AC W94178;

DT 14-APR-1999 (first entry)

DE Murine BR96 monoclonal antibody.

KW BR 96; monoclonal antibody; antigen-binding region; carcinoma; murine;
 KW immunotoxin; radioactive conjugate; enzyme; cytotoxic drug.

OS Mus musculus.

PN US5869045-A.

PD 09-FEB-1999.

PE 02-JUN-1995; 95US-0459354.

PR 14-JUN-1993; 93US-0077253.

PR 30-JUN-1989; 89US-0374947.

PR 26-JUN-1990; 90US-0544246.

PR 05-MAY-1993; 93US-0057444.

PR 02-JUN-1995; 95US-0459354.

PI (BRIM) BRISTOL-MYERS SQUIBB CO.

PI Bruce KF, Hellstrom I, Hellstrom KE, Schreiber GJ;

DR WPI: 1999-152693/13.

DR N-PSDB: X06697.

PT BR96 monoclonal antibody fragments - for treatment or diagnosis of

PT carcinomas

PS Example 4; Fig 35A-B; 132pp; English.

CC This represents a murine BR96 monoclonal antibody. The invention
 CC provides a BR96 polypeptide comprising the antigen-binding regions of
 CC the BR96 monoclonal antibody produced by hybridoma HB10036 [ATCC HB
 CC 10036]. The antibody fragments and their functional equivalents are used
 CC to kill human carcinoma cells or to prepare conjugates, e.g.
 CC immunotoxins, radioactive conjugates or enzyme conjugates capable of
 CC converting prodrugs into cytotoxic drugs, for treatment or diagnosis of
 CC human carcinomas.

SQ Sequence 240 AA;

Query Match 85.3%; Score 64; DB 20; Length 240;

Best Local Similarity 85.7%; Pred. No. 0.31;

Matches 12; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

OY 1 GGGSGGSRASGGGS 14

DB 117 GGGSGGSRASGGGS 130

RESULT 8

Y77553 Y77553 standard; Protein: 240 AA.

AC Y77553;

DT 03-MAY-2000 (first entry)

DE Amino acid sequence of murine chimeric Mab BR96 sfv.

KW Carcinoma; monoclonal antibody; antigen-binding region; BR96; mouse;

KW Ley carbohydrate determinant; breast; colon; ovary; lung; human;

KW epithelial cell; gastrointestinal tract; tumour.

```

XX OS Mus sp.
XX PN US6020145-A.
XX PD 01-FEB-2000.
XX PF 03-NOV-1994; 94US-0333840.
XX PR 14-JUN-1993; 93US-0077253.
XX PR 26-JUN-1990; 90US-0544246.
XX PR 30-JUN-1989; 89US-0374947.
XX PR 05-MAY-1993; 93US-0057444.
XX PA (BRIM ) BRISTOL-MYERS SQUIBB CO.
XX PI Hellstrom KE, Bruce KF, Schreiber GJ, Hellstrom I;
XX PS WPI; 2000-146882/13.
XX DR N-PSDB; 258952.
XX PF Using an antigen-binding region of murine monoclonal antibody BR96 for
XX PI detection of carcinomas in human tissue
XX PS Example 14; Fig 35A-B; 133pp; English.
XX CC The invention relates to a method for determining the presence of
XX CC carcinoma in human tissue that comprises contacting a specimen of tissue
XX CC with a monoclonal antibody or antigen-binding fragment that has an
XX CC antigen-binding region of murine monoclonal antibody (Mab) BR96 produced
XX CC by hybridoma ATCC 10036 and specifically binds to human carcinoma cells,
XX CC and detecting the binding of the antibody or fragment to the tissue. The
XX CC method can be used to detect carcinomas in human tissue. BR96
XX CC specifically recognizes a portion of an epitope of a Ley carboxylate
XX CC determinant abundantly expressed on carcinomas of the breast, colon,
XX CC ovary and lung and also on epithelial cells from the gastrointestinal
XX CC tract. BR96 has high specificity for carcinoma cells of different organ
XX CC types but shows no binding to other types of tumor cells e.g. T-cell
XX CC lymphoma cell lines, B-cell lymphoma cell lines and melanoma cell lines.
XX CC The present sequence represents the amino acid sequence of murine
XX CC chimeric Mab BR96 sFv.
XX SQ Sequence 240 AA;

```

Query Match 85.3%; Score 64; DB 21; Length 240;
 Best Local Similarity 85.7%; Pred. No. 0.31;
 Matches 12; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```

QY 1 GGGSGGGRASGGGS 14
DB 117 gggsgggsgggsggs 130

```

RESULT 9
 W37085
 ID W37085 standard; Protein; 301 AA.
 AC W37085;
 XX
 DT 14-JUL-1998 (first entry)
 XX
 DE Anti-human SC single chain Fv/protamine fusion protein.
 XX
 KW Fusion protein; SC single chain Fv/protamine fusion protein; SECR;
 KW exogenous gene; serpin enzyme complex receptor; gene therapy;
 KW target binding moiety.
 XX
 OS Homo sapiens.
 OS Mus sp.
 XX
 PN W09746100-A1.

```

PD 11-DEC-1997.
XX  

XX PF 03-JUN-1997; 97WO-US09858.
XX PR 03-JUN-1996; 96US-0656906.
XX  

XX PA (UYCA-) UNIV CASE WESTERN RESERVE.
XX  

XX PI Davis PB, Ferkol TW, Ziadly A;
XX PR WPI; 1998-041783/04.
XX DR N-PSDB; V00611.
XX PT Delivering compacted exogenous nucleic acid to cells by targeting
XX PT the serpin enzyme complex receptor, used in gene therapy
XX  

XX PS Example 9; Pages 120-121; 158pp; English.
XX CC This represents an anti-human SC single chain Fv/protamine fusion protein
XX CC sequence containing a target binding moiety capable of binding to a
XX CC serpin enzyme complex receptor (SECR), and a nucleic acid binding moiety.
XX CC This can be used in a method for delivering an oligonucleotide to a
XX CC mammalian cell. The method comprises conjugating the target binding
XX CC moiety to a nucleic acid binding moiety to form a carrier and coupling
XX CC the carrier to an expression vector encoding one or more gene products
XX CC to form a pharmaceutical composition. A mammalian cell having on its
XX CC surface SECR, is contacted with the pharmaceutical composition under
XX CC conditions allowing binding to the receptor resulting in delivery of the
XX CC pharmaceutical composition to the interior of the cell. The composition
XX CC and method are used for the introduction of exogenous genetic material
XX CC into target host cells expressing SECR on their surface. The nucleic acid
XX CC may encode a functional wild-type or mutant gene or may be an antisense
XX CC sequence or other nucleic acid having a therapeutic effect. The fusion
XX CC protein may comprise a protein portion having therapeutic properties,
XX CC e.g. enzymatic activity, cytokine activity and antibiotic activity which
XX CC is delivered to a cell surface via the SECR binding moiety. The nucleic
XX CC acid can be compacted at high concentrations with the carrier molecule at
XX CC a critical salt concentration. The condensation of such complexes
XX CC provides structural features to the DNA/cationic lipid complex that
XX CC prolongs in vivo expression.
XX SQ Sequence 301 AA;

```

Query Match 85.3%; Score 64; DB 19; Length 301;
 Best Local Similarity 85.7%; Pred. No. 0.38;
 Matches 12; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```

QY 1 GGGSGGGRASGGGS 14
DB 113 gggsgggsgggsggs 126

```

RESULT 10
 W56163
 ID W56163 standard; Protein; 738 AA.
 AC W56163;
 XX
 DT 28-JUL-1998 (first entry)
 XX
 DE New DNA sequence isolated from Pinctada fucata.
 XX
 KW Pinctada fucata; protein; cosmetic.
 XX
 OS Pinctada fucata.
 OS JP10080285-A.
 XX
 PN JP10080285-A.
 XX
 PD 31-MAR-1998.
 XX
 PF 28-MAY-1997; 97JP-0138461.

```

XX 15-JUL-1996;      96JP-0184459.
XX
XX (MIKI-) MIKIMOTO SEIYAKU KK.
PA
XX WPI: 1998-254410/23.
DR
XX N-PSDB; V22683.
DR
XX New cDNA and e.g. vector, host cell and polypeptide - used to
PT produce polypeptide in high yields, which is used in cosmetics
XX
XX Claim 9; Pages 9-11, 15pp; Japanese.
XX
CC The present sequence represents protein encoded by a new DNA sequence
CC isolated from Plinctada fucata. The protein be used as an ingredient
CC in cosmetics.
XX
XX Sequence       738 AA;
SO

Query Match          85.3%; Score 64; DB 19; Length 738;
Best Local Similarity 85.7%; Pred.No. 0.88;
Matches 12; Conservative 0; Mismatches 2; Indels 0; Gaps 0.

QY      1 GGGGSGGRASGGGS 14
        ||||| | |||||
Db       671 gggsgsggsgsgsgs 684

RESULT 11
R86794
ID      R86794 standard; Peptide; 16 AA.
XX
XX AC      R86794;
XX
XX DT      01-JUL-1996 (first entry)
XX
XX DE      GM-CSF/EPO linker fragment, L1.
XX
XX Linker sequence; granulocyte macrophage-colony stimulating factor;
KW GM-CSF; erythropoietin; EPO; hybrid protein; stimulation;
KM haematopoiesis; erythroid differentiation.
XX
XX Synthetic.
OS
XX WO9533057-A1.
PN
XX 07-DEC-1995.
PD
XX 26-MAY-1995;    95WO-EP02011.
PF
XX 27-MAY-1994;    94IT-0F10106.
PR
XX (MENA ) MENARINI RICERCHE SUD SPA.
PA
XX Carloni C, Coscarella A, De Santis R, Mele A;
PI
XX WPI: 1996-030568/03.
DR
XX N-PSDB; T06969.
DR
XX
XX GM-CSF-EPO hybrid proteins contg. linker sequence - to stimulate
PT haematopoiesis, with higher action specificity compared to unlinked
PT granulocyte macrophage colony stimulating factor (GM-CSF) and
PT erythropoietin (EPO)
XX
XX Claim 5; Fig 3; 26pp; English.
PS

The sequences given in R86794-96 represent the linker sequences of the
CC invention. These linkers are used to join granulocyte macrophage-
CC colony stimulating factor (GM-CSF) and erythropoietin (Epo) in the
CC formation of a hybrid protein. The hybrid protein is useful for the
CC stimulation of haematopoiesis. The fused molecules exhibit a higher
CC specificity of action on erythroid differentiation, compared to that
CC of an equimolar mixture of unlinked GM-CSF and Epo molecules.
```

	Query Match	81.3%;	Score 61;	DB 17;	Length 16;	
	Best Local Similarity:	84.6%;	Pred. No.	0.06;		
	Matches 11; Conservative	0;	Mismatches	2;	Indels	0;
OY	1 GGGSGGRRASCGG	13				
Db	2 gggsggagaggaggg	14				
RESULT	12					
ID	Y08856 standard; Protein;	232 AA.				
XX	Y08856;					
AC						
XX	13-AUG-1999 (first entry)					
Df						
XX	Expression construct pRC53 protein fragment 9.					
DE						
XX						
KM	Pseudo-type retroviral vector; surface capsid protein; virus core;					
KM	retroviral packaging cell; psi-negative expression construct; gag gene;					
KW	pai gene; cell-specific transduction; cell targeting; gene therapy;					
KN	vaccination; diagnosis; cystic fibrosis; ADA-deficiency; HIV-1 infection;					
KV	chronic granulomatosis.					
OS	Spleen necrotis virus.					
OS	Mus sp.					
OS	Synthetic.					
PN	WO992848-A2.					
PD	10-JUN-1999.					
PF	27-NOV-1998;	98WO-DE03542.				
PR	28-NOV-1997;	97DE-1052855.				
PA	(BUND) BUNDESREPUBLIK DEUT PAUL-EHRlich-INST.					
Cichutek K,	Mergel-Millitzer H;					
DR	N-PSeD; X77617.					
MPi:	1999-35813Z/30.					
Disclosure:	Fig 4A-B; 41pp; German.					
This invention describes novel pseudo-type retroviral vectors with modified surtice capsid proteins. The vectors of the invention consist essentially of a virus core chosen from the group of murine leukemia virus (MLV), human immunodeficiency virus (HIV), simian immunodeficiency virus (SIV), lentivirus or foamyvirus and a virus capsid protein from spleen necrotic virus (SNV). The invention also describes a retroviral packaging cell for the retroviral vector above, and also transformed with one or more pai-negative expression constructs, the gag and pol gene products of MLV, HIV, SIV or foamyvirus, or also with a psi-negative SNV-env expression construct and/or psi-negative SNV-ENV foreign polyepide-SNV-HIV-ENV or SNV-SIV-ENV expression construct. The pseudo-type retroviral vectors with modified surface capsid proteins are suitable for cell-specific transduction of a selected mammal cell type (cell targeting). The methods are useful for the production of the pseudo-type retroviral vectors and for gene transfer in selected cell types. The vectors can be used in medicaments for gene therapy, vaccination or diagnosis. They are particularly useful for therapy of cyclic fibrosis, ADA deficiency, chronic granulomatosis or HIV-1 infection. This sequence represents protein fragments of the expression construct pRC53 which is composed from the SNV ENV protein and a murine derived scfv fragment.						

XX Sequence 232 AA;

Query Match
Best Local Similarity 81.3%; Score 61; DB 20; Length 232;
Matches 11; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

OY 1 GGGSGGSGRASGGS 14
||||||| : |||||
DB 42 gggsgsgsgsgsggs 55

RESULT 13
Y08769
ID Y08769 standard; Protein: 232 AA.
AC Y08769;
XX
DT 13-AUG-1999 (first entry)
XX
DE Expression construct pRC53 protein fragment 9.
XX
KM Cell-specific retroviral vector; antibody domain; vaccination; scFv;
KM Cell-specific transduction; B cell RNA; variable region; heavy chain;
KM light chain; immunoglobulin; psi-negative; retroviral Env protein;
KM capsid protein; cell targeting; gene therapy; diagnosis; cystic fibrosis;
KM ADA-deficiency; chronic granulomatosis; HIV-1 infection;
XX
OS Spleen necrosis virus.
OS Mus sp.
OS Synthetic.
XX
PN WO9928489-A2.
XX
PD 10-JUN-1999.
XX
PF 27-NOV-1998; 98WO-DE03543.
XX
PR 28-NOV-1997; 97DE-1052854.
XX
PA (BUND) BUNDESREPUBLIK DEUT PAUL-EHRlich-INST.
XX
PI Cichutek K, Engelstaedter M;
XX
DR WPI; 1999-371131/31.
XX
DR N-PSDB; X77614.
XX
PT Cell-specific retroviral vectors with antibody domains suitable for
PT cell-specific transduction of selected mammal cell types - useful
PT for vaccination and gene therapy for treatment of, e.g. cystic
PT fibrosis
XX
PS Disclosure; Fig 4A-B; 38pp; German.
XX
CC This invention describes the construction of novel cell-specific
CC retroviral vectors with antibody domains suitable for cell-specific
CC transduction of selected mammal cell types. The invention describes a
CC method to produce cell-specific retroviral vectors which consists
CC essentially of the following steps: (a) immunization of a mammal with
CC one or more cell populations (b) isolation of RNA from the immunized
CC mammal, especially the B cell RNA (c) production of a cDNA strand of
CC the variable region of the heavy and light chains of the immunoglobulins
CC isolated from the RNA by RT-PCR with primers for the respective
CC immunoglobulin chains, where the primer nucleic acid sequences are for
CC an oligopeptide linker (d) ligation of the cDNA strand to scFv-cDNA (e)
CC ligation of the scFv cDNA in a phagemid vector and transformation of a
CC host bacterium with the vector (f) isolation of phage, by selection of
CC phage that bind to the cell population used in step (a) (g) cleavage of
CC the scFv coding DNA fragments from the cell-specific phage and ligation
CC into a psi-negative retroviral Env-expression vector (h) transformation
CC of a Env-scFv expression vector to be maintained in a packaging cell and
CC (i) isolation of a packaging cell with the retroviral vectors. The

CC pseudo-type retroviral vectors with modified surface capsid proteins are
CC suitable for cell-specific transduction of a selected mammal cell type
CC (cell targeting). The methods are useful for the production of the
CC pseudo-type retroviral vectors and for gene transfer in selected cell
CC types. The vectors can be used in medicaments for gene therapy,
CC vaccination or diagnosis. They are particularly useful for therapy of
CC cystic fibrosis, ADA-deficiency, chronic granulomatosis or HIV-1
CC infection. This sequence represents a fragment of the expression
CC construct pRC53 which is composed from the SNV ENV protein and a murine
CC derived scFv fragment.
XX
SQ Sequence 232 AA;

Query Match
Best Local Similarity 81.3%; Score 61; DB 20; Length 232;
Matches 11; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

OY 1 GGGSGGSGRASGGS 14
||||||| : |||||
DB 42 gggsgsgsgsgsggs 55

RESULT 14
Y44413
ID Y44413 standard; Protein: 339 AA.
XX
AC Y44413;
XX
DT 22-MAR-2000 (first entry)
XX
DE B7.2-beta 2 microglobulin fusion protein-1.
XX
KM B7.2-b2m fusion protein; murine B7.2 co-stimulatory molecule; b2m;
KM human beta-2 microglobulin; tumour antigen; bacterial antigen;
KM viral antigen; tumour-specific cytotoxic T-cell; vaccination;
KM immune therapy.
XX
OS Mus sp.
OS Homo sapiens.
OS
XX
FH Key
FH Domain
FT 2..220 Location/Qualifiers
FT /note= "Extracellular portion of murine B7.2"
FT 221..225
FT /note= "Sequence created by insertion of restriction site
FT in the nucleic acid sequence"
FT 226..240
FT /note= "linker sequence"
FT 241..339
FT Domain
PN WO9964597-A1.
XX
PD 16-DEC-1999.
XX
PF 03-JUN-1999; 99WO-US12309.
XX
PR 10-JUN-1998; 98US-0088813.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Ribaldo RK, Shields M;
XX
DR WPI; 2000-116544/10.
XX
PT New beta-2 microglobulin fusion proteins, used for the preparation of
PT vaccines for use against bacterial antigens -
XX
PS Claim 15; Fig 3; 49pp; English.
XX
CC The present sequence is a B7.2-b2m fusion protein comprising murine B7.2
CC co-stimulatory molecule and mature human beta-2 microglobulin. The

CC presence of fusion protein on the tumour cell surface enhances the immune
CC system response to the tumour antigens present on tumour cell surface by
CC boosting the generation of tumour-specific cytotoxic T-cells. These
CC proteins can effectively target a desired protein to the outer membrane
CC of a cell. The proteins and corresponding nucleic acids encoding them can
CC be used for vaccination against bacterial, viral or tumour antigens. The
CC products can also be used for immune therapy.
XX
SQ Sequence 339 AA;

Query Match 81.3%; Score 61; DB 21; Length 339;
Best Local Similarity 78.6%; Pred. No. 0.99;
Matches 11; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
OY 1 GGGSGGRASGGGS 14
||||||| |||||
Db 226 gggsgsgsgsgsggga 239

RESULT 15
Y44414
ID Y44414 standard; protein; 358 AA.
AC Y44414;
XX
DT 22-MAR-2000 (first entry)
XX
DE B7.2-beta 2 microglobulin fusion protein-2.
XX
KW B7.2-b2m fusion protein; murine B7.2 co-stimulatory molecule; b2m;
KW human beta-2 microglobulin; tumour antigen; bacterial antigen;
KW viral antigen; tumour-specific cytotoxic T-cell; vaccination;
KW immune therapy.
XX
OS Mus sp.
OS Homo sapiens.
XX

XX FH Key Location/Qualifiers
FT Peptide 1..20
FT /label= Signal_peptide
FT /note= "Derived from human beta-2 microglobulin"
FT 21..239
FT /note= "Extracellular portion of murine B7-2"
FT 240..244
FT Region /note= "Sequence created by insertion of restriction site
FT in the nucleic acid sequence"
FT 245..249
FT /label= linker_sequence
FT 260..358
FT Domain /note= "Mature form of human beta-2 microglobulin"
XX
FN W09964597-A1.
XX
PD 16-DEC-1999.
XX
PE 03-JUN-1999; 99WO-US12309.
XX
PR 10-JUN-1998; 98US-0088813.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Ribaudo RK, Shields M;
XX
DR WPI: 2000-116544/10.
XX
PT New beta-2 microglobulin fusion proteins, used for the preparation of
PT vaccines for use against bacterial antigens -
XX
PS Claim 15; Fig 4; 49pp; English.
XX
CC The present sequence is a B7.2-b2m fusion protein having the hbeta-2
CC signal sequence. The fusion protein comprises murine B7.2 co-stimulatory

CC molecule and mature human beta-2 microglobulin. Signal peptides directs
CC expression of the protein to a specified location in the cell. The
CC presence of fusion protein on the tumour cell surface enhances the immune
CC system response to the tumour antigens present on tumour cell surface by
CC boosting the generation of tumour-specific cytotoxic T-cells. These
CC proteins can effectively target a desired protein to the outer membrane
CC of a cell. The proteins and corresponding nucleic acids encoding them can
CC be used for vaccination against bacterial, viral or tumour antigens. The
CC products can also be used for immune therapy.
XX
SQ Sequence 358 AA;

Query Match 81.3%; Score 61; DB 21; Length 358;
Best Local Similarity 78.6%; Pred. No. 1;
Matches 11; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
OY 1 GGGSGGRASGGGS 14
||||||| |||||
Db 245 gggsgsgsgsgsggga 258

Search completed: March 15, 2001, 10:52:22
Job time: 972 sec

